



Florida Department of Agriculture & Consumer Services
BOB CRAWFORD, Commissioner
The Capitol • Tallahassee, FL 32399-0800
December 9, 1999

Please Respond to:

MEMORANDUM

SUMMARY

**MICROBIOLOGICAL DATA ON UNPASTEURIZED ORANGE JUICE SAMPLES
ANALYZED BY FOOD AND RESIDUE LABORATORIES
DIVISION OF FOOD SAFETY
FLORIDA DEPARTMENT OF AGRICULTURE & CONSUMER SERVICES**

On February 20, 1996, the Florida Department of Citrus implemented rules adopting HACCP principles for firms processing more than 30,000 boxes fruit into fresh squeezed unpasteurized citrus juice per year. These processors are under U.S. Department of Agriculture inspection. For processors using less than 30,000 boxes of fruit per year for unpasteurized juice, the Florida Department of Agriculture and Consumer Services (DOACS) Division of Food Safety has been inspecting for sanitation and compliance with GMP's, encouraging the use of HACCP principles, and doing routine analytical work.

The analytical methods used by DOACS are as follows: for E. coli using the AOAC/BAM method, E. coli O157:H7 using the Organa Technika Elisa method for screening and FDA/USDA cultural methods for O157:H7 confirmation and Salmonella using Gene Trak DNA hybridization method. In July 1999, we added the CDC cultural method for Salmonella. Data presented at the FDA hearing at Lake Alfred in May 1998 were analyzed by the pre July 1999 methods.

Data was presented to the FDA - May, 1998 hearing in Lake Alfred, Florida on 383 samples taken from 210 firms (see attached table). No Salmonella or E. coli O157:H7 were detected. 5.2% of the 210 firms had E. coli levels less than 10/ml MPN. One firm, a small juice bar, had E. coli levels at 10 - 100/ml MPN, and 1 gift fruit stand had E. coli levels over 100/ml MPN.

In updating the data from February 20, 1996 (adoption of the citrus rule) through September 1999, the department analyzed 573 samples from approximately 275 firms revealing 3.3% positive for E.coli. (attached) Thirteen of the 275 firms had samples positive for E. coli. No Salmonella or E. coli O157:H7 were detected.

In addition, we have just completed a survey from October through November 1999 on unpasteurized juice made from both stored and freshly harvested fruit used for fresh squeezed citrus juices and juice blends. This survey included both USDA inspected firms as well as smaller firms under the regulation of the state. In 159 regulatory samples surveyed, E. coli at a level of 2.3/ml MPN was detected from 1 firm. None of the above samples were positive for E. coli O157:H7 or Salmonella.

Complete analytical results and sampling details are available on all surveys by contacting Dr. Joanne Brown, Division of Food Safety, Florida Department of Agriculture and Consumer Services, 3125 Conner Boulevard, Tallahassee, Florida 32399-1650, 850/488-0670.



Florida Agriculture and Forest Products
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DATA SUMMMARY
FRESH UNPASTEURIZED FRUIT JUICES
SMALL PROCESSOR AND RETAIL SAMPLES
BUREAU FOOD AND RESIDUE LABORATORIES
FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

May 22, 1998

| | |
|---|----------------|
| Number of Samples | 383 |
| Number of Firms | 210 |
| Number (%) Positive <i>E. coli</i> | 17(4.4) |
| Samples Gift Fruit (Firms) | 9 (6) |
| Samples Small Markets (Firms) | 3 (3) |
| Samples Chain Retail (Firms) | 4 (3) |
| Samples Juice Bar (Firms) | 1 (1) |
| Number (%) <i>E. coli</i> <1/ml MPN | 8 (47) |
| Number (%) of Firms Positive <i>E. coli</i> | 13 (6.2) |
| Number of Firms <i>E. coli</i> <1/ml MPN 5 | 5 |
| Number of Firms <i>E. coli</i> >1<10/ml MPN | 6 |
| Number of Firms <i>E. coli</i> >10<100/ml MPN | 1 (Juice Bar) |
| Number of Firms <i>E. coli</i> >100/ml MPN | 1 (Gift Fruit) |

All of the Positives for which we have follow-up have been subsequently negative for *E. coli*.

Samples were for the period of May, 1995 through May, 1998.

DATA SUMMMARY
FRESH UNPASTEURIZED FRUIT JUICES
SMALL PROCESSOR AND RETAIL SAMPLES
BUREAU FOOD AND RESIDUE LABORATORIES
FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

February 20, 1996 to September 1999*

| | |
|---|-------------|
| Number of Samples | 573 |
| Number of Firms | 275 approx. |
| Number (%) Positive <i>E. coli</i> | 3.3% |
| Major Processors | 1 |
| Small Processors | 18 |
| Number (%) of Firms Positive <i>E. coli</i> | 13 |
| Number of Firms <i>E. coli</i> <1/ml MPN 5 | |
| Number of Firms <i>E. coli</i> >1<10/ml MPN | 6 |
| Number of Firms <i>E. coli</i> >10<100/ml MPN | 1 |
| Number of Firms <i>E. coli</i> >100/ml MPN | 1 |

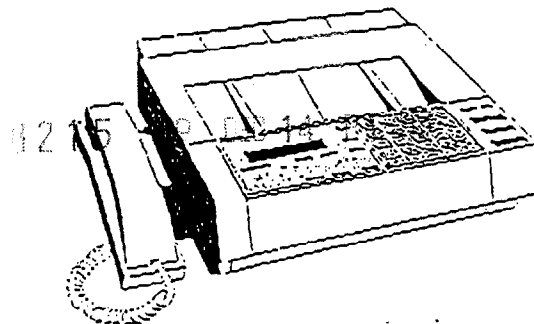
No Salmonella were isolated.

No *E. coli* 0157:H7 were detected.

*Samples taken prior to rule governing unpasteurized juice processing adopted in February 20, 1996, are not reported.

*Florida Department of
Agriculture and Consumer
Services*

*Bureau of Food and
Residue Laboratories*



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ADDITIONAL COMMENTS: